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SCALING UP VERMONT'S LOCAL FOOD PRODUCTION, DISTRIBUTION, AND MARKETING

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EXECUTIVE SUMMARY

OVERVIEW

While institutional demand for local food has been demonstrated in numerous projects in Vermont and greater New England over the past few years, there are still hurdles in the sourcing and supplying of local products to meet this need.

Until recently, farmers have been hesitant to scale up for the institutional market, and traditional distribution systems have been slow to adapt to changes in their sourcing patterns for institutions. In an attempt to address gaps in the local food

supply chain for institutions, Vermont food hubs and regional food centers have responded in part by creating programming to support more processing, aggregation, storage, and distribution infrastructure. Some of these food hubs have resulted in 'ultra-local' distribution systems that have established strong connections between local farms and Vermont institutions.

However, the influx in local distribution mechanisms burgeoning from food hub initiatives coupled with an increase in farmers testing direct sales to institutions has increased the complexity of ordering, delivery, and accounting for institutions and, in some cases, has also increased the number of vehicles on the road. The extra overhead of dealing with multiple vendors has been described by many buyers as a

key barrier to purchasing local food. Improving the system that provides institutions with the local products they want in an efficient manner is the main focus of this phase of NOFA Vermont and Vermont FEED's farm to institution work.

Five hundred and forty-one institutions were contacted for this study, along with 66 infrastructure organizations. A total of 188 institutions and 67 infrastructure organizations responded. NOTE: All findings are based solely on respondent answers and cannot necessarily be generalized to the state of Vermont.



THIS PROJECT SEEKS TO:

- Provide essential baseline data and articulate a path for overcoming barriers to accomplish Goal 2 of the Farm to Plate Strategic Plan: **Consumers in institutional settings (e.g., K-12 schools, colleges, state agency cafeterias, hospitals, prisons) will consume more locally produced food.** The Farm to Plate Strategic Plan is a 10-year plan for strengthening Vermont's food system.
- Provide producers with quantifiable information in order to scale up production for institutions.
- Provide information about infrastructure for processing, storage, aggregation and distribution of local foods.

THE STUDY UNDERTOOK TWO STATEWIDE SURVEYS TO:

- Quantify demand for local produce and eggs by Vermont institutions (schools, colleges and universities, state cafeterias, hospitals, prisons, food shelves, nursing homes, and senior centers), and identify barriers and opportunities for increasing institutional local food purchasing.
- Inventory statewide infrastructure for aggregating, storing, distributing, and processing local produce and eggs.

GENERAL FINDINGS & CONCLUSIONS

A key finding from the institutional demand survey is that, for reporting institutions, a minimum of \$5.0 million dollars are spent annually on fruit, \$8.6 million on vegetables, and \$345,000 on eggs. This amounts to about 15% of respondents' fruit budgets, 23% of their vegetable budgets, and 26% of their egg budgets are spent on local product. This leaves an opportunity gap of over \$11.2 million that could be redirected towards local purchases. (See tables 1.1, 1.2, and 1.3)

Our research was also able to assess the validity of some supply and demand claims that have surfaced anecdotally over NOFA Vermont and VT-FEED's years of working with institutional food service directors.

We found that:

- There *is* demand across many institutions in Vermont for local produce and eggs.
- They are buying some already.
- They want more.
- They need an efficient and safe supply chain for local food purchasing.
- The majority of institutions want to purchase local fruits, vegetables, and eggs directly from their primary distributor or slightly fewer, directly from a farmer.

We also found that:

- Good Agricultural Practices (GAP) certification and product liability are not required by most institutions.
- Pasteurizing eggs is not a prerequisite to servicing institutions.
- Light or value added processing of fruits and vegetables is not a prerequisite to servicing institutions.
- Institutional demand is not limited to three seasons.

Our research also uncovered some findings we were not expecting.

For example, we discovered that:

- The majority of responding processing facilities are limited to private use.
- The majority of responding distributors are not yet using logistics management software or tools such as computerized mapping, which could aid in their operational efficiency.
- There is a high demand for raw, unpasteurized eggs.

TABLE 1.1 INSTITUTIONAL DOLLARS SPENT ANUALLY

Items	Total Expenditures	Total Spent On Locally Sourced	Opportunity Gap
Fruit	\$5,050,000	\$757,038	\$4,292,963
Vegetables	\$8,637,500	\$1,970,563	\$6,666,938
Eggs	\$345,000	\$90,991	\$254,009
Total	\$14,032,500	\$2,818,592	\$11,213,910

TABLE 1.2 TOTAL POUNDS PURCHASED ANNUALLY

Items	Total Volume Used in Pounds	Total Volume of Local Used in Pounds	Opportunity Gap in Pounds
Apples	196,775	101,942	94,833
Pears	72,875	1,368	71,507
Stone Fruit	59,650	1,723	57,928
Berries	51,725	4,437	47,288
Green Beans	79,625	7,151	72,474
Broccoli	81,200	4,793	76,407
Cabbage	48,100	3,560	44,540
Carrots	123,650	17,108	106,542
Corn	83,975	4,901	79,074
Cucumbers	80,575	10,833	69,742
Head Lettuce	89,800	8,062	81,738
Mixed Salad Greens	61,375	6,772	54,603
Onions	102,800	10,693	92,107
Peppers	70,950	6,877	64,073
Spinach	32,175	2,561	29,614
Root Crops	52,300	9,184	43,116
Summer Squash	39,425	5,193	34,232
Tomatoes	116,125	20,936	95,189
Potatoes	164,575	38,118	126,457
Winter Squash	51,150	16,094	35,056

TABLE 1.3 TOTAL EGGS PURCHASED ANNUALLY

Items	Total Dozens Purchased	Total Local Dozens Purchased	Opportunity Gap in Dozens
Eggs	224,250	78,983	145,268

INSTITUTIONAL DEMAND SUMMARY

Institutional purchasing of local fruit and vegetables is well-established. Of the responding institutions, 73% spend some portion of their budget on local fruit and 78% spend some portion of their budget on local vegetables.

Pasteurization is not a prerequisite for the institutional egg market. While local egg purchasing is not yet as commonplace within the institutional market as fruits or vegetables (44% spend some portion of their budget on local eggs), 81% of institutions use fresh, whole, unpasteurized eggs, and 62% of respondents would like to source eggs locally.

Demand for fruits, vegetables, and eggs is stable and growing. Of the responding institutions, 94% stated their needs would stay the same or increase over the next three years.

Institutions want fresh, whole fruits and vegetables. Two-thirds of institutions purchase unprocessed, "fresh, whole" fruits and vegetables.



Institutions want to buy from their primary distributors (e.g., Reinhart, Sysco, US Foods) or direct from a farmer.

More than 50% of institutions cited their preferred format for purchasing local products is through a primary distributor. A slightly lower number cited buying direct from a farmer. A few noted their preferred format is through some other form of distribution network which included vegetable/fruit distributors such as Black River and Upper Valley Produce. This demonstrates the need to continue making strides in cultivating direct relationships with farmers and institutions, but also points out that in order to achieve full impact within the institutional market, an emphasis must be placed on effecting change within the traditional distribution chain and increasing access of local food through national distributors.

Top opportunities for vegetable growers. From a list of 16 crops selected for their relative ease of production in Vermont, the following represent the top opportunities for vegetable growers. They are prioritized by crops that had the highest percentage of purchasing by local institutions coupled with the least intensive processing requirements:



FRESH, WHOLE: broccoli, mixed salad greens, head lettuce, spinach

FROZEN, CUT: broccoli, green beans, corn, carrots, winter squash

CANNED: green beans, corn

Top opportunities for fruit growers. From a selection of four fruit groups that are currently grown in Vermont, the following represent the top opportunities for fruit growers. They are prioritized by crops that had the highest percentage of purchasing by local institutions coupled with the least intensive processing requirements:



FRESH WHOLE: apple, pears, stone fruit, berries

FROZEN, WHOLE: berries

CANNED: pears, stone fruit

Top four motivating factors for institutions to purchase local were:

- To support local farmers
- To support the local economy
- Freshness
- Quality

The top challenge faced by institutions wishing to purchase local is food budget constraints. After the financial barrier, the following top three limiting factors were:

FOR FRUITS AND VEGETABLES

- Storage
- Labor/food prep budget
- Products are not available in the form needed; Local farmer does not deliver to my institution (these two factors ranked the same)

FOR EGGS

- Food safety assurances/concerns
- Labor/food prep budget; Storage (these two factors ranked the same)
- Have not been able to focus on this

In order to increase local purchasing, the most helpful form of assistance for institutional buyers other than money would be:

- Greater local product availability from existing distributor
- Increased awareness of local products carried by distributors
- Support connecting with local producers
- Increased/improved storage

INFRASTRUCTURE SUMMARY

Most institutions do not require Good Agricultural Practices (GAP) certification and product liability insurance. Only 16% of infrastructure respondents require their suppliers to be GAP certified or to carry product liability insurance.

The majority of processing facilities (67%) are limited to private use only.

Most distributors are not taking advantage of GPS/GIS or logistics management tools. Only 16% of distributors are using tools to create efficient route sequencing.

The vast majority of infrastructure organizations use a different definition of "local" than that of *Farm To Plate*. Only 13% of respondents use the same definition of local as the *Farm to Plate Strategic Plan: products that originated from Vermont or within a 30-mile radius of Vermont.*

Infrastructure sites have seen an increased demand for local:

- 64% of respondents have received increased requests for local product
- 53% currently source local products
- 55% are interested in sourcing or sourcing more local products

There is a desire to help move local food around the state:

- 31% of respondents are already picking up food from producers and aggregators en-route
- 25% are picking up food from food shelves
- 12% are picking up fee based drop shipments en-route, back hauling for other distributors/aggregators, and/or picking up/dropping off at community kitchens/shared use facilities
- 28% are not yet doing these things, but would consider doing these things

RECOMMENDATIONS

The following recommendations are based on utilizing the survey results to identify opportunities that, if implemented, will make an immediate impact on increasing local foods to the institutional marketplace.

RECOMMENDATIONS FOR INSTITUTIONAL BUYERS

- 1 Communicate with primary distributors about identifying Vermont or New England grown products.**

OBJECTIVE: Increase the opportunity to order local produce and eggs.

- 2 Work with support organizations, food hubs, and food centers to facilitate communication between other institutions in the region to explore greater purchasing power by aggregating demand for local products.**

OBJECTIVE: Improve the opportunities for larger quantities of product to be purchased.

- 3 Work with local organizations, food hubs, and food centers to facilitate conversations with egg producers in regions about the quantity needed and terms necessary for purchasing local eggs.**

OBJECTIVE: Increase the amount of local eggs purchased by institutions.

RECOMMENDATIONS FOR STATE AGENCIES AND SERVICE PROVIDERS:

- 1 Work with distributors to increase their sourcing and identification of local produce and eggs.**

OBJECTIVE: Increase the availability and knowledge of local foods through buyers' existing distributors.

- 2 Work with farmers and producers to provide technical and business planning assistance to scale-up for the institutional market.**

OBJECTIVE: Create sustainable business plans that ensure the price point and volume needs of institutions works for farmer and producer businesses.

- 3 Work with aggregation sites to increase awareness of their services to others within the supply chain.**

OBJECTIVE: Facilitate access to markets for producers, facilitate access to local products for distributors, and aggregate product from small producers into quantities needed for institutional sale.

- 4 Connect distributors with local producers, food hubs, and self-started distribution systems that service the same buyers to develop local supply chains.**

OBJECTIVE: Build partnerships that streamline distribution to improve delivery efficiency, saving time, gas, money, and reducing environmental impact of distribution; minimizing distribution responsibility as a deterrent for producers not interested in distribution; and streamlining the ordering process for buyers.

- 5 Provide technical assistance, training, and support to increase the number of distributors using automated logistics management tools.**

OBJECTIVE: Improve delivery efficiency, saving time, gas, money, and reducing environmental impact of distribution.

- 6 Foster communication and dialogue about the demand and opportunities for local foods between buyers and suppliers in regions.**

OBJECTIVE 1: Create and reinforce an awareness in the supply chain for the growing demand for local foods from institutional buyers and help the supply chain make institutional needs a priority.

OBJECTIVE 2: Provide trainings and opportunities for institutions to purchase and use local produce in season or process for year-round use.

OBJECTIVE 3: Help generate awareness of lightly processed and value added local products for year-round use.

7 Encourage adoption of a unified, standard definition within the institutional market place for “local” food.

OBJECTIVE: Eliminate differences in interpretation from impeding the movement of local foods into the institutional market supply chain and allow for the creation of metrics to track the purchasing of local products.

8 Assist suppliers with tools/techniques to emphasize their locally sourced products.

OBJECTIVE: Assist infrastructure sites with marketing.

9 Communicate the names of suppliers who source local products to the institutional market.

OBJECTIVE: Assist infrastructure sites with marketing and institutions with sourcing.

10 Conduct a feasibility study for the berry market on institutional price points.

OBJECTIVE: Evaluate whether it is financially feasible for local berry producers to consider scaling up for the institutional market.

11 Continue to explore storage options and bring potential solutions to the attention of buyers, suppliers, aggregators, and distributors.

OBJECTIVE: Minimize storage constraints as an impediment to local sourcing.

12 Connect buyers interested in local, whole, unpasteurized eggs with distributors and suppliers of local eggs.

OBJECTIVE: Realize an immediate opportunity to increase the sourcing of local foods through the unmet demand for local, fresh, whole eggs.

RECOMMENDATIONS FOR GROWERS

1 Connect with interested buyers from the appendices to follow up on demand for the high priority opportunities (see top opportunities for vegetable and fruit growers on page 5).

OBJECTIVE 1: Begin to cultivate sales relationships and evaluate the return on investment for scaling up for your specific farm and interests.

OBJECTIVE 2: Work with farm viability providers to assess the ability of growers to meet the needs and requirements of the institutional market.

RECOMMENDATIONS FOR INFRASTRUCTURE PROVIDERS

1 Review the list of institutions from Appendix C in this report to identify your existing customers. Note what they cite for local product demand and their preferred method for sourcing. Are there local products they are looking for that you already carry? Are there local products that if you carried they would buy from you?

OBJECTIVE: Use the appendices as a tool to help immediately increase your sales of local goods, and identify opportunities to expand your line up of local offerings.

2 Use the contact lists and maps to identify additional institutions to serve.

OBJECTIVE 1: Food hubs/centers and distributors will be able to offer institutions better service and more local products.

OBJECTIVE 2: Facilitate logistics planning for accessing local products to help service the growing demand.

3 Review list and maps of other infrastructure providers and begin to work with partners on ways your organization can partner to help move local food throughout the state or make the movement of local food more efficient.

OBJECTIVE: Increase efficiency of how local food moves across the state, increase ability to move more local food throughout the state, and increase institutional access to local food.

CONTACTS FOR IMPLEMENTING RECOMMENDATIONS

In the appendices (available at www.nofavt.org) readers will find tables and maps with purchasing/sourcing information from institutions who participated in the survey and agreed to share their data. The tables and maps are meant to be used as a starting place to facilitate networking between buyers, service providers, and growers. In Appendix C, there is a table for each fruit and vegetable crop and eggs that shows what form of product each buyer is looking for, how much they are looking for, what their budget is, how much they are already buying locally, and whether they expect their needs to change over the next three years. The accompanying maps in Appendix B show where each of these institutions are located along with certain attribute data. In Appendix D there is a table for each of the infrastructure categories (aggregation, storage, processing, and distribution) that shows the services respondents provide and for which products—fruit, vegetables, and/or eggs. Again, these tables have accompanying maps in the Appendix B to show where each of the service providers are located along with their attribute data.

METHODS

To complete the project, NOFA Vermont & Vermont FEED:

A. DEVELOPED A RESEARCH GROUP

for the project composed of NOFA VT staff Abbie Nelson and Erin Buckwalter, research consultant Rose Wilson of Rosalie J. Wilson Business Development Services, mapping consultant Dan Erickson of Advanced Geospatial Systems, and UVM CDAE Assistant Professor David Conner and graduate student Florence Bécot.

B. ESTABLISHED AN ADVISORY COMMITTEE TO INCLUDE THE RESEARCH GROUP AND:

Peter Allison, FINE
 Florence Becot, UVM
 David Conner, UVM
 Dan Erickson, AGS, LLC
 Annie Harlow, ACORN
 Ellen Kahler, VSJF
 Tara Kelly, RAFFL
 Abbey Willard, VAAFM
 Rose Wilson, Rosalie J. Wilson BDS

C. NOTIFIED OVER 80 FARM TO INSTITUTION STAKEHOLDERS

about this project and used stakeholder input to develop lists for the survey audiences.

D. CREATED TWO SURVEYS

using survey monkey. Sent survey recipients three e-mail reminders and in some cases conducted follow up phone calls.

E. REACHED OUT TO FARM TO INSTITUTION STAKEHOLDERS, FOOD HUBS AND FOOD CENTERS

to share the two surveys with their regional contacts and in some cases to do targeted follow up in areas where the response rate was low.

F. ANALYZED

the data and created maps.



RESULTS: INSTITUTIONAL DEMAND

GENERAL INFORMATION

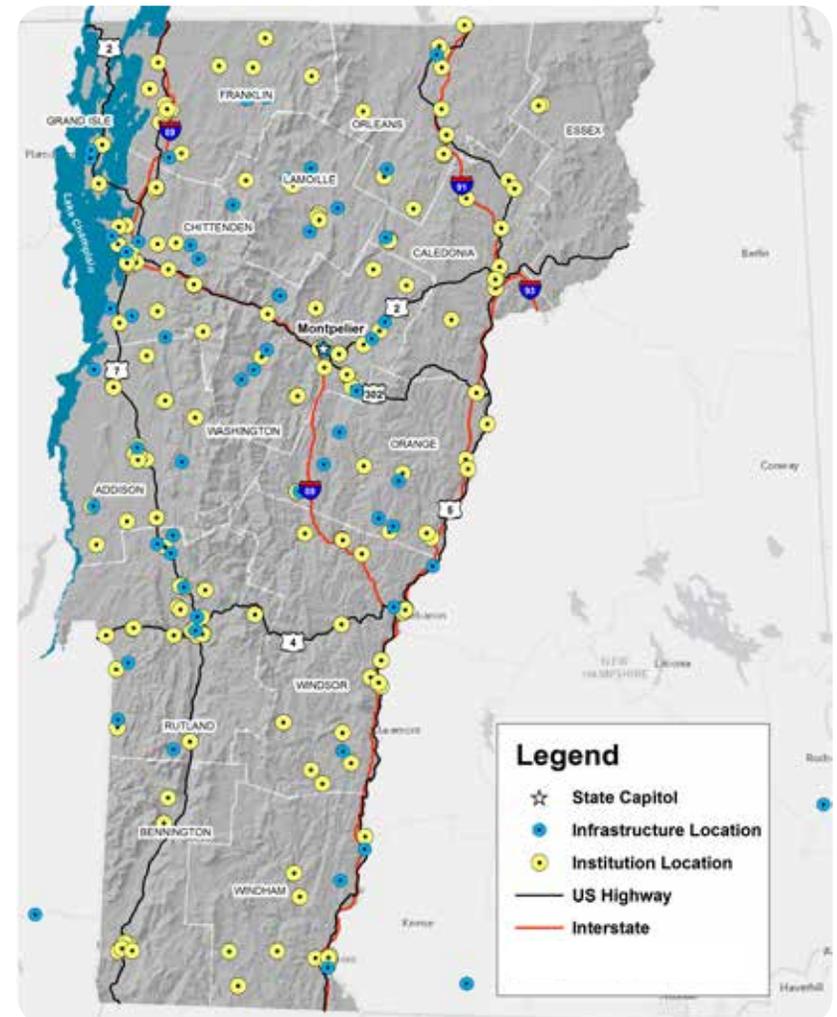
There were 188 demand respondents from eight institutional types. Table 2.1 provides a breakdown of institution types, the number of institutions contacted per type, and the response rate. While there were 188 respondents, not every respondent answered each question. Thirty-two percent of respondents noted they were reporting for more than one kitchen/food preparation facility. Map 1 shows institutional demand and infrastructure point locations.

TABLE 2.1 DEMAND RESPONSE RATE BY TYPE

Institution Types	Total Inventoried	Total Responses	Response Rate
Hospitals	17	12	71%
Colleges and Universities	23	8	35%
Nursing homes	41	9	22%
Schools	320	104	32%
Senior Meal Sites	12	13*	108%
Prisons	8	6	75%
State and Corp. Cafeterias	5	3	60%
Food shelves	115	32	28%
Uncategorized	0	1	N/A
TOTAL	541	188	35%

* More senior meal sites responded than were originally contacted due to outreach by statewide partners.

MAP 1 INSTITUTIONAL DEMAND & INFRASTRUCTURE POINT LOCATIONS





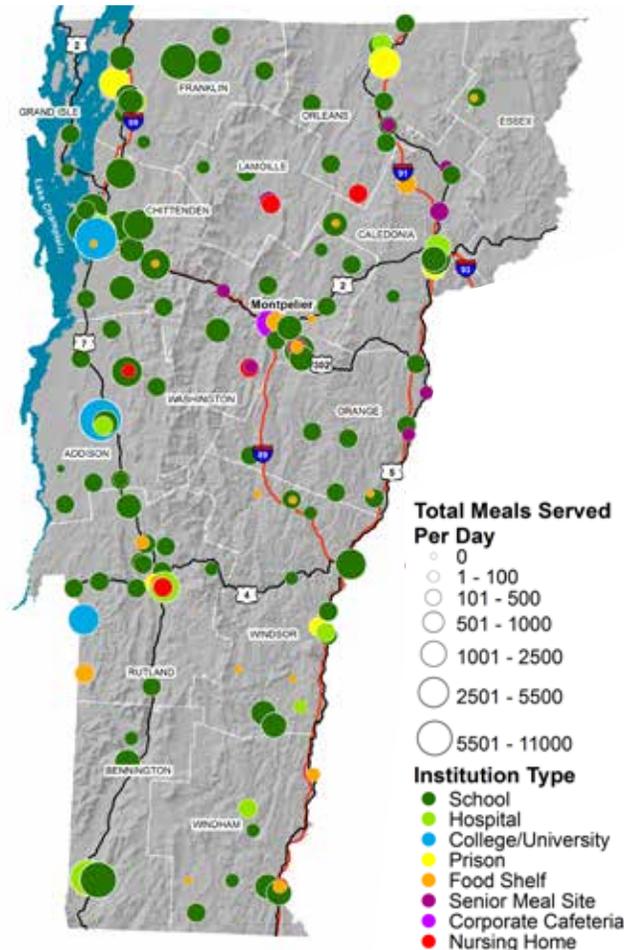
ROLE OF RESPONDENTS

With respect to what role the respondent held within their organization, many respondents selected multiple titles. The most frequently chosen title was food buyer/purchasing agent. Figure 1 depicts the breakdown for all titles.

SEASONALITY OF SERVICE

Forty-nine percent prepare meals year round, 49% operate based on the school year, and 2% are summer based operations.

MAP 2: TOTAL MEALS SERVED DAILY



VOLUME

The survey concluded there are a minimum of 21,500 breakfasts, 34,325 lunches, and 7,450 dinners being served annually. Map 2 depicts the total number of meals served daily by institution type throughout Vermont. There are 20 institutions serving 300 or more breakfasts per day, 42 serving 300 or more lunches per day, and nine serving 300 or more dinners per day.

DEFINITION OF LOCAL

Only 29% of institutional respondents use the definition of local that corresponds with the definition in the *Farm to Plate Strategic Plan: products that originated from Vermont or within a 30-mile radius of Vermont*. A further 29% consider local to refer to Vermont only products, 28% consider it to mean Vermont and bordering states/provinces, 8% use a specific radius from their institution, and 6% consider it to mean products from New York and New England.

LOCAL PURCHASING HABITS

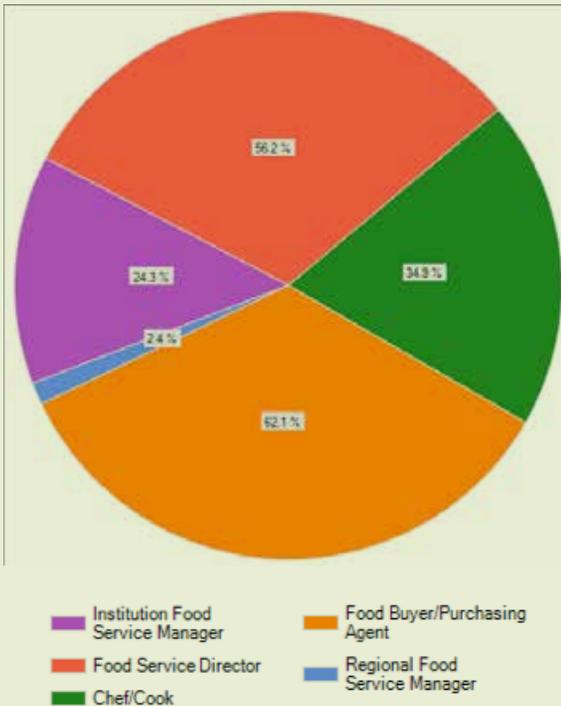
Food shelves, as a group, stand out as being an unexpectedly large purchaser of local vegetables as indicated in Map 2.

Seventy-eight percent of institutional buyers are buying local vegetables, 73% are buying local fruit, and 44% are sourcing local eggs. This only assesses whether or not they are purchasing any local produce and eggs, not the quantities or varieties.

When questioned about their interest in purchasing local, 80% stated they would like to purchase or purchase more local fruits and vegetables, and 62% would like to purchase, or purchase more, local eggs.



FIGURE 1 ROLE OF INSTITUTIONAL RESPONDENTS



THE TOP FOUR MOTIVATING FACTORS FOR INSTITUTIONS TO PURCHASE LOCAL ARE:

- TO SUPPORT LOCAL FARMERS
- TO SUPPORT LOCAL ECONOMY
- FRESHNESS
- QUALITY

The top challenge faced by institutions wishing to purchase local was cited as food budget constraints. After the financial barrier, the following limiting factors differed between produce and eggs.

For fruits and vegetables:

- Storage
- Labor/food prep budget
- Products are not available in the form I need them/Local farmer does not deliver to my institution (these two factors were ranked the same)

For eggs:

- Food safety assurances/concerns
- Labor/food prep budget & storage (these two factors were ranked the same)
- I have not been able to focus on this

When asked what assistance, other than money, would be most helpful in facilitating the purchase of more local foods, the top four items cited were:

- Greater local product availability from my distributor (69%)
- Increased awareness of local products carried by my distributor (65%)
- Support connecting with local producers (63%)
- Increased/improved storage [at my facility] (43%)

In terms of what tools are most helpful to institutions in promoting their use of locally sourced foods, respondents stated that:

- Identifying products as “grown in Vermont / locally grown” (64%)
- Location of the farm (49%)
- Timing education curriculum to coincide with the food being consumed in the cafeteria (46%)
- Field trips to the farm / Using the name of the farm and farmer (43%) (these two factors were ranked the same)

Institutions recorded their preferred method of purchasing/access to local foods as such:

FRUIT

- Primary distributor (ie. Sysco, US Foods, Reinhart) (57%)
- Direct from a farmer (54%)
- Produce distributor (ie. Black River Produce, Upper Valley Produce) (47%)
- Egg distributor (5%)
- No preference (11%)

VEGETABLES

- Primary distributor (ie. Sysco, US Foods, Reinhart) (58%)
- Direct from a farmer (56%)
- Produce distributor (ie. Black River Produce, Upper Valley Produce) (48%)
- Egg distributor (3%)
- No preference (8%)

EGGS

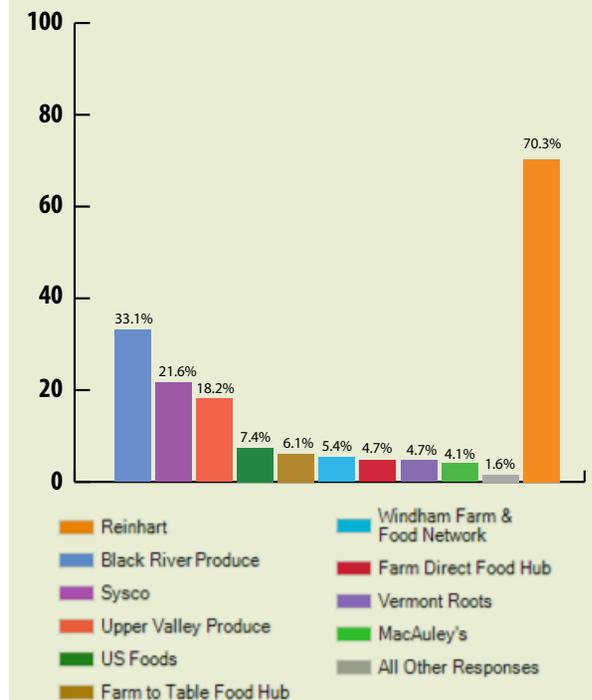
- Primary distributor (ie. Sysco, US Foods, Reinhart) (34%)
- Direct from a farmer (38%)
- Produce distributor (ie. Black River Produce, Upper Valley Produce) (22%)
- Egg distributor (25%)
- No preference (7%)

The four distributors institutions cited using most were:

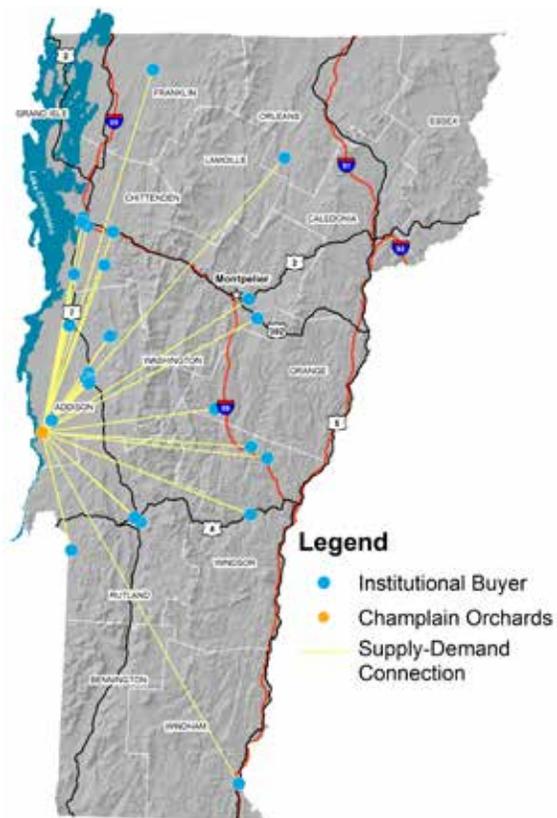
- Reinhart (70%)
- Black River Produce (33%)
- Sysco (22%)
- Upper Valley Produce (18%)

Figure 2 depicts the breakdown of distributors that institutions are using. Buyers at 44% of institutions stated they limit the number of vendors with whom they interact. The primary reasons are, “to simplify work related to order and delivery process / minimize time spent on order and delivery.” In addition to streamlining purchase and order procedures, nearly half of the buyers limiting their number of vendors are also under a “primary vendor contract.”

FIGURE 2 PERCENT OF RESPONDENTS USING SELECTED DISTRIBUTORS



MAP 3 CHAMPLAIN ORCHARDS INSTITUTIONAL CUSTOMERS



Institutions want to buy from their primary distributors (e.g., Reinhart, Sysco, US Foods) or direct from a farmer.

More than 50% of institutions cited their preferred format for purchasing local products is through a primary distributor. A slightly lower, but almost equivalent number, would also buy direct from a farmer. Few noted their preferred format is through any other form of distribution network, which included vegetable/fruit distributors such as Black River and Upper Valley Produce. Obviously, direct sales to an institution allows the farmers to keep more of the consumer dollars but increases the paperwork for institutions, a noted barrier. Map 3 is an example of institutional purchases from one producer, Champlain Orchards, who was listed most often (n=28) by institutional respondents as one of the producers they purchase from.

ON SITE FOOD PRODUCTION

On site food production is becoming more common with 52% of respondents noting their institution has a garden. These gardens are producing a combined conservative estimate of 22,185 pounds of food annually.

PURCHASING HABITS

Respondents were asked to estimate their total dollar value spent on produce and eggs, how much of that volume was attributed to local products, and what product forms they preferred. Following is a summary of their responses.



FRUIT PURCHASING

Respondents reported spending a combined annual total of \$5,050,000 on fruit of which \$757,038 was sourced locally. This represents an opportunity gap of \$4,292,963. See Table 2.2 for fruit spending and local sourcing.

Within the fruit category, spending habits on total fruit purchases were as follows:

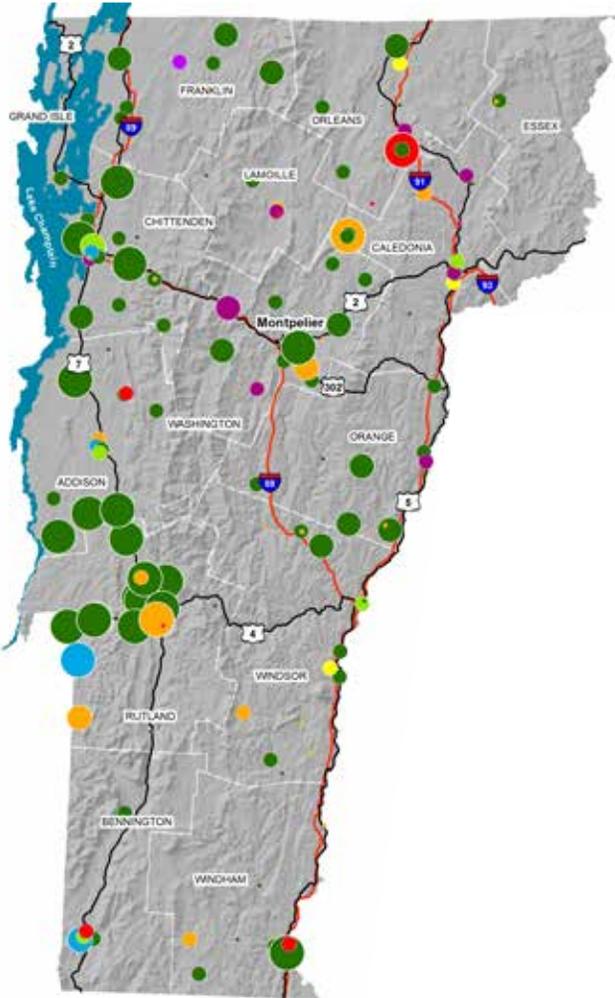
- 61 institutions spend between \$0-5,000
- 34 spend up to \$10,000
- 21 spend up to \$25,000
- 12 spend up to \$50,000
- 13 spend up to \$100,000
- 2 spend up to \$200,000
- 3 spend up to \$500,000
- 3 spend over \$500,000
- 39 did not answer

With respect to how much of that was spent on local fruit:

- 44 institutions spend 50% or more
- 21 spend up to 25%
- 12 spend 11-20%
- 9 spend 6-10%
- 17 spend 3-5%
- 18 spend up to 2%
- 9 spend no money on local fruits
- 19 were unsure
- 39 did not answer

TABLE 2.2 FRUIT SPENDING AND LOCAL SOURCING			
Items	Total Expenditures	Total Spent On Locally Sourced	Opportunity Gap
Fruit	\$5,050,000	\$757,038	\$4,292,963

MAP 4 PERCENT OF TOTAL FRUIT EXPENDITURES SPENT ON LOCAL FRUITS



Estimated percentage of total fruit expenditure spent on local* fruits

- 0% or Did Not Answer
- 1-25%
- 26-50%
- >50%

Note: Respondents who indicated, "don't know" have not been mapped.

Institution Type

- School
- Hospital
- College/University
- Prison
- Food Shelf
- Senior Meal Site
- Corporate Cafeteria
- Nursing Home

*Local is defined as from Vermont or within a 30 mile radius of Vermont.

Table 2.3 shows the total pounds of each fruit category purchased annually, the amount that is local, and the opportunity gap that can be fulfilled with local fruits.

Key institutional total fruit purchasing data:

APPLES

- 146 institutions purchase apples
- The most common volume usage rate is 1,000 pounds per year
- 37 institutions purchase upwards of 2,500 pounds per year, and 16 report purchasing 5,000 pounds or greater per year

BERRIES

- 136 institutions purchase berries
- The most common volume usage rate is 250 pounds per year
- 7 institutions purchase upwards of 2,500 pounds per year, and 2 report purchasing 5,000 pounds or greater per year

STONE FRUIT

- 125 institutions purchase stone fruit
- Most common volume usage rate is 250 pounds per year

- 7 institutions purchase upwards of 2,500 pounds per year, and 5 report purchasing 5,000 pounds or greater per year

PEARS

- 126 institutions purchase pears Most common volume usage rate is 250 pounds per year
- 11 institutions purchase upwards of 2,500 pounds per year, and 6 report purchasing 5,000 pounds or greater per year.



Courtesy of A. Maggiani



Courtesy of VT FEED

TABLE 2.3 TOTAL POUNDS OF FRUIT PURCHASED PER YEAR.

Items	Total Pounds Purchased	Total Pounds of Local Purchased	Opportunity Gap in Pounds
Apples	196,775	101,942	94,833
Pears	72,875	1,368	71,507
Stone Fruit	59,650	1,723	57,928
Berries	51,725	4,437	47,288

Regarding preferred product format, fresh whole fruits and berries were most desirable (65%). For pears and stone fruit, institutions used as much canned as fresh product (56%), and for berries demand for fresh and frozen product was almost the same at 48% (See Table 2.4).

TABLE 2.4: PREFERRED FRUIT PRODUCT FORMATS

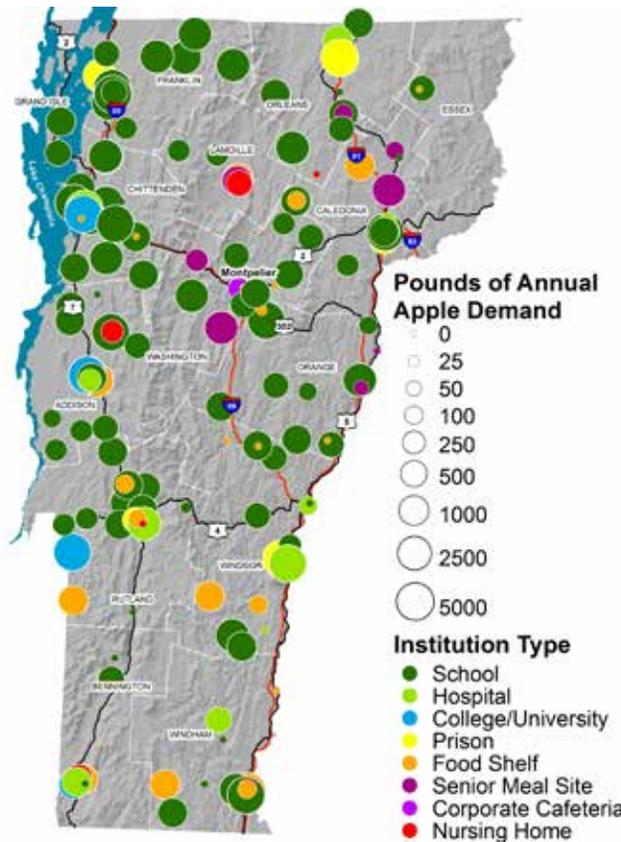
Items	Preferred Product Formation	Next Preferred Product Format
Apples		
Pears		
Stonefruit		
Berries		

CANNED
 FRESH, WHOLE
 FROZEN, CUT
 FROZEN, WHOLE

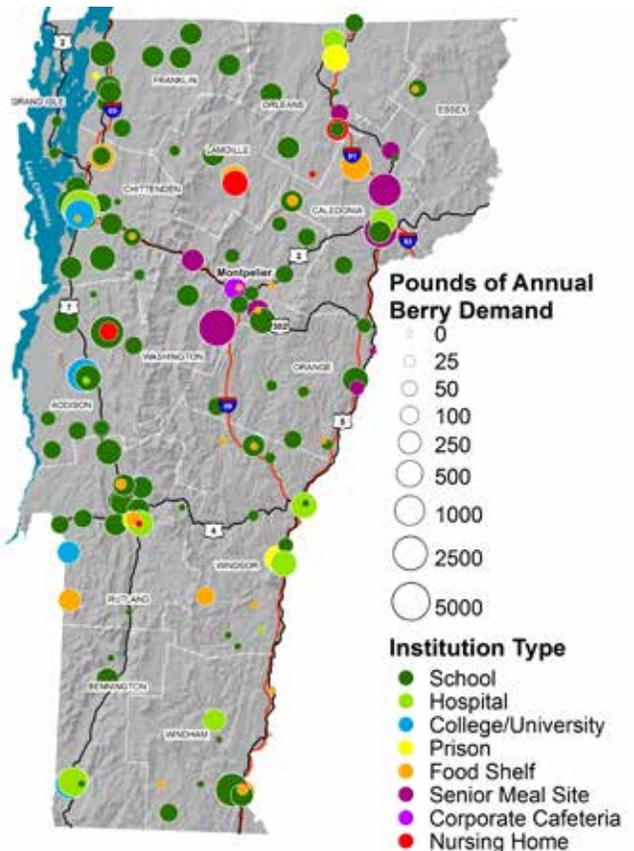
Maps 5 and 6 are examples of annual total fruit institutional demand. Additional maps depicting demand for stone fruit and pears are in the Appendix B.



MAP 5 POUNDS OF ANNUAL APPLE DEMAND



MAP 6 POUNDS OF ANNUAL BERRY DEMAND





DEMAND FOR HEAD LETTUCE IS GREATER AT PRISONS AND SENIOR MEAL SITES WHILE DEMAND FOR MIXED SALAD GREENS IS GREATER AT OTHER INSTITUTIONAL TYPES.

VEGETABLE PURCHASING

With respect to vegetables, respondents spent a combined annual total of \$8,637,500 on vegetables, of which \$1,970,563 was for vegetables sourced locally. This represents an opportunity gap of \$6,666,938. See Table 2.5 for total pounds of vegetables purchased per year.

Within the vegetable category, spending habits on total vegetable purchases were:

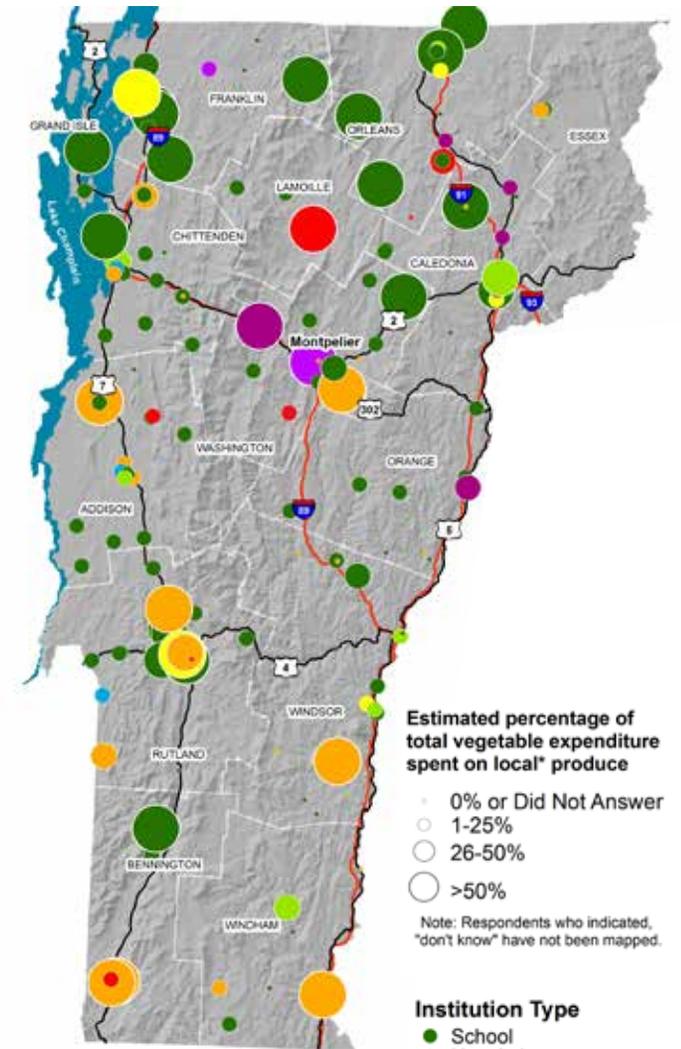
- 40 respondents spend between \$0-5,000
- 35 spend up to \$10,000
- 25 spend up to 25,000
- 13 spend up to \$50,000
- 10 spend up to \$100,000
- 7 spend up to \$200,000
- 3 spend up to \$500,000
- 9 spend over \$500,000
- 46 did not answer

With respect to how much of that was spent on local vegetables:

- 17 respondents spend 50% or more
- 27 spend up to 25% or more
- 16 spend 11-20% or more
- 27 spend 6-10% or more
- 13 spend 3-5% or more
- 15 up to 2% or more
- 3 spend no money
- 26 were unsure
- 44 did not answer

See Map 7 for the percentage of total expenditures for local vegetables by institutions throughout the state. The most commonly selected annual volume used per institution was 250 pounds for each vegetable.

MAP 7: PERCENT OF TOTAL VEGETABLE EXPENDITURE



Note: Respondents who indicated, "don't know" have not been mapped.

*Local is defined as from Vermont or within a 30 mile radius of Vermont.

TABLE 2.5 VEGETABLE SPENDING AND LOCAL SOURCING

Items	Total Expenditures	Total Spent On Locally Sourced	Opportunity Gap
Vegetables	\$8,637,500	\$1,970,563	\$6,666,938

TABLE 2.6A NUMBER OF INSTITUTIONS IN EACH BUYING & USAGE CATEGORY FOR VEGETABLES

Crop (In Pounds)	Pounds								
	0	25	50	100	250	500	1000	2500	5000
Beans, green	1	13	14	26	38	22	13	5	6
Broccoli	4	12	14	27	24	24	17	9	4
Cabbage	14	20	22	25	26	9	8	4	3
Carrots	0	6	9	13	35	33	24	13	8
Corn	1	11	10	22	42	24	16	5	6
Cucumbers	2	11	22	22	28	26	17	4	6
Head Lettuce	11	8	12	15	22	26	20	8	6
Mixed Salad Greens	17	19	21	21	15	19	7	7	4
Onions	3	12	18	21	28	18	16	7	10
Peppers	4	14	24	24	22	23	10	6	5
Spinach	13	25	28	24	27	8	7	0	2
Stored Root Crops	15	22	18	31	25	10	4	5	4
Summer Squash	9	27	15	30	34	13	5	2	2
Tomatoes	4	7	16	14	33	22	22	11	9
White Potatoes	1	5	7	11	24	28	33	16	14
Winter Squash	9	12	18	32	39	13	8	3	3

TABLE 2.6B TOTAL POUNDS OF VEGETABLES

Total Volume Used in Pounds	Total Pounds of Local Purchased	Opportunity Gap in Pounds
79,625	7,151	72,474
81,200	4,793	76,407
48,100	3,560	44,540
123,650	17,108	106,542
83,975	4,901	79,074
80,575	10,833	69,742
89,800	8,062	81,738
61,375	6,772	54,603
102,800	10,693	92,107
70,950	6,877	64,073
32,175	2,561	29,614
52,300	9,184	43,116
39,425	5,193	34,232
116,125	20,936	95,189
164,575	38,118	126,457
51,150	16,094	35,056

Table 2.6 demonstrates the number of institutions and what their average volume use is, ranging from 0 to 5,000 pounds per year. Table 2.6 also shows total pounds of each vegetable category purchased per year, the amount sourced locally, and the opportunity gap that can be fulfilled with local.



Courtesy of R. Maggiani

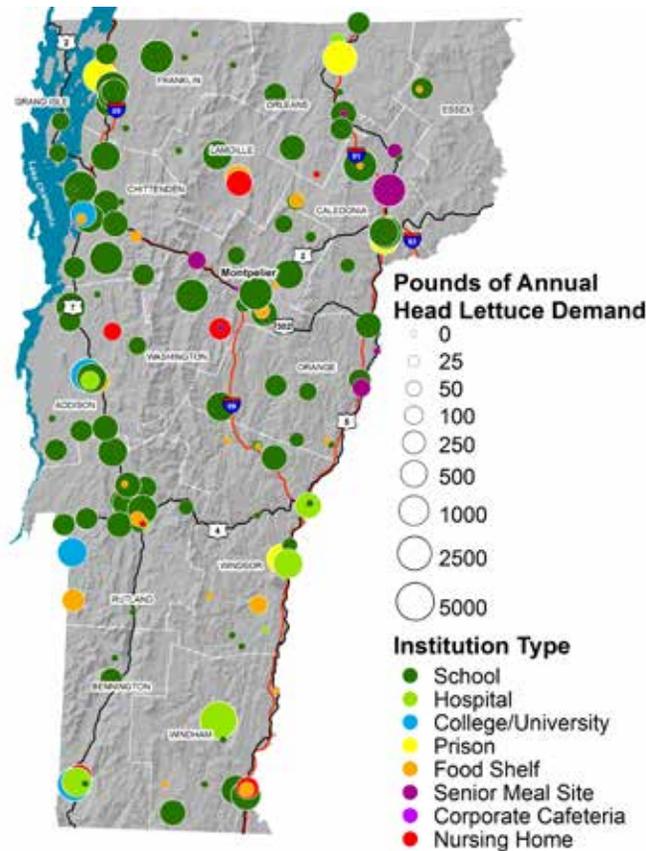
TABLE 2.7: PREFERRED VEGETABLE PRODUCT FORMAT

Items	Preferred Product Formation	Next Preferred Product Format
Green Beans	▲	■
Broccoli	♣	▲
Cabbage	♣	▲
Carrots	♣	▲
Corn	▲	♣
Cucumbers	♣	▲
Head Lettuce	♣	▲
Mixed Salad Greens	♣	▲
Onions	♣	▲
Peppers	♣	▲
Spinach	♣	⦿
Root Crops	♣	■
Summer Squash	♣	▲
Tomatoes	♣	■
Potatoes	♣	■
Winter Squash	♣	▲

■ CANNED
 ♣ FRESH, WHOLE
 ▲ FRESH CUT
 ▲ FROZEN, CUT
 ⦿ WASHED



MAP 8: POUNDS OF ANNUAL HEAD LETTUCE DEMAND



MAP 9: POUNDS OF ANNUAL WINTER SQUASH DEMAND

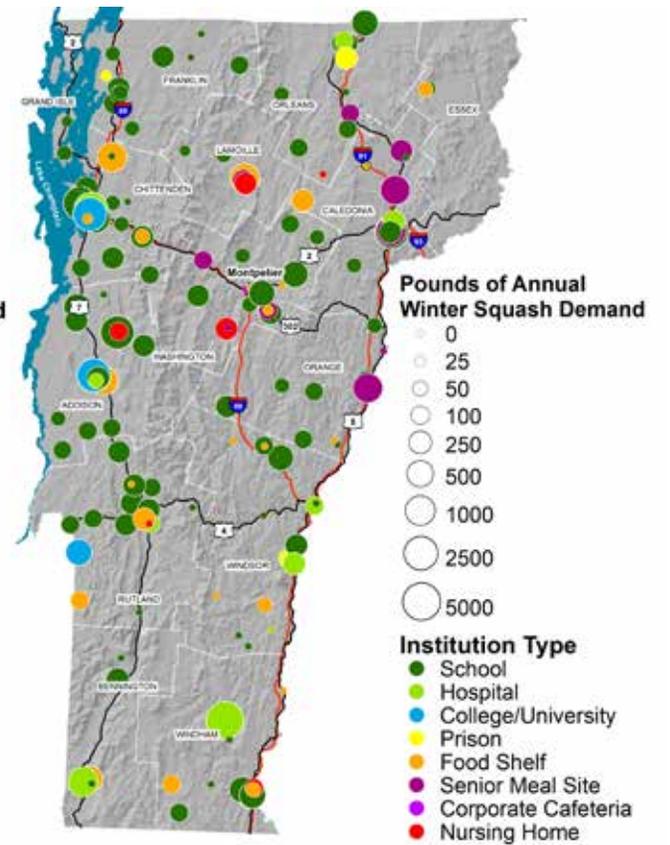


Table 2.7 indicates the preferred product formats for vegetables. Maps 8 and 9 are examples of institutional demand for head lettuce and winter squash. Additional maps depicting demand for the other 14 vegetable crops are in Appendix B.

POTENTIAL FOR FUTURE GROWTH

With respect to changes in vegetable demand, 94% of institutions expect their needs to stay the same or grow within the next three years. Of those who said their volume might decrease, two expect they will experience declining enrollment, two expect increased on-site garden production would reduce the need to purchase product, and one expected their budget would be increasingly challenged. If the 6% who expect purchasing to decrease stopped buying vegetables completely, the dollar value of this loss would create a maximum impact on the overall vegetable purchasing habits of \$517,500 or 6% of the current volume of vegetable purchasing. Given the small percentage potential for a drop in ordering, and the significant potential for equivalent or increased ordering, this market should be stable and growing, which bodes well for producers and distributors considering investing in servicing this market.

As indicated in Map 10, schools have the highest expected increases in fruit and vegetable demand.

INTEREST IN PRESERVING FRESH VEGETABLES FOR FUTURE USE

Respondents were asked whether they purchase vegetables in-season to prepare and save for use out-of-season. Seventy percent noted they do not purchase vegetables in season to process or freeze for later use. For those that do purchase vegetables for processing, the most common volume purchased was between 1 and 50 pounds. Collectively, the total volume of vegetables being purchased annually for processing and freezing came to 33,000 pounds.

The total volume purchased per crop for processing and freezing is shown in Table 2.8.

MAP 10: EXPECTED CHANGE VEGETABLE PURCHASES

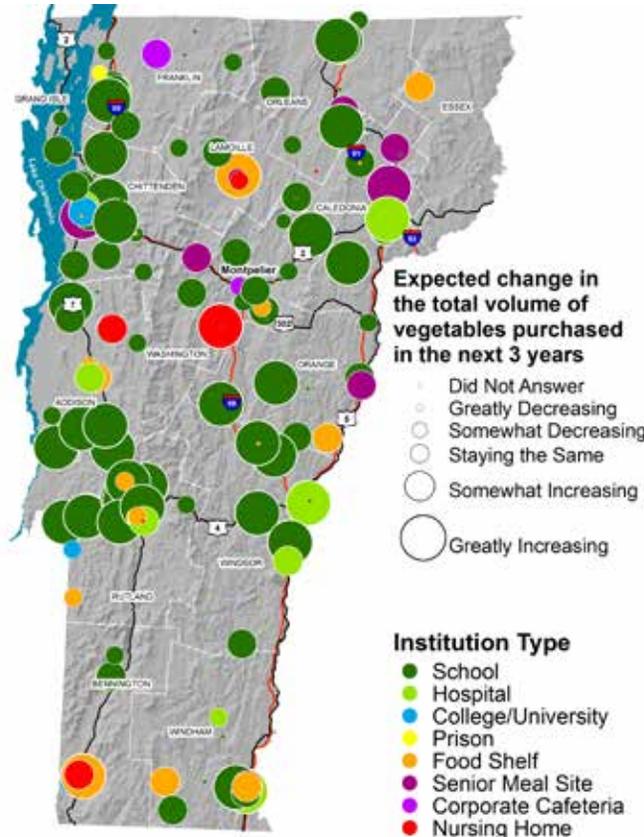


TABLE 2.8 VEGETABLES PURCHASED ANNUALLY FOR PROCESSING OR FREEZING FOR OUT-OF-SEASON USE

Crop	Pounds
Winter Squash	6,575
Tomatoes	3,800
Corn	3,225
Carrots	2,775
White Potatoes	2,600
Summer Squash	2,275
Onions	2,100
Peppers	2,050
Cucumbers	1,775
Beans, green	1,300
Spinach*	1,225
Broccoli	1,150
Stored Root Crops	975
Mixed Salad Greens*	575
Cabbage	450
Head Lettuce*	150
Stored Root Crops	975

* We are unsure how they are processing these crops.



Courtesy of D. Dalginow



EGG PURCHASING

Institutions spend a combined total of \$345,000 per year on eggs, purchasing 224,250 dozen eggs as recorded in Table 2.9.

The majority of institutions (63%) are relatively small volume users purchasing less than \$1,000 and 1,000 dozen eggs per year. There are however, some sizeable accounts. Table 2.10 provides a breakdown of the number of institutions in each buying and usage category from 0 to 20,000 or greater.

TABLE 2.9 EGG SPENDING AND LOCAL SOURCING

Total Expenditures	Total Expenditures on Local	Opportunity Gap
\$345,000	\$90,991	\$254,009
Total Dozens Purchased	Total Local Dozens Purchased	Opportunity Gap in Dozens
224,250	78,983	145,268

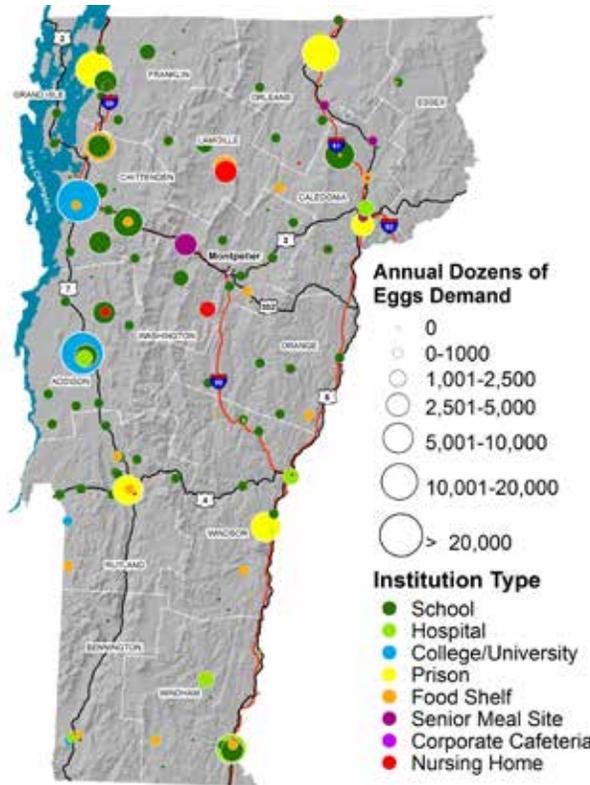
TABLE 2.10 NUMBER OF INSTITUTIONS IN EACH BUYING AND USAGE CATEGORY FOR EGGS

	0-1,000	1,001-2,500	2,501-5,000	5,001-10,000	10,001-20,000	>20,001	Total
Dollars	83	18	12	8	6	4	\$345,000
Dozens	88	13	10	5	3	2	224,250

Interestingly, 44% of respondents indicate they already source some local eggs, and 32% note they source 50% or more of their total egg needs locally.

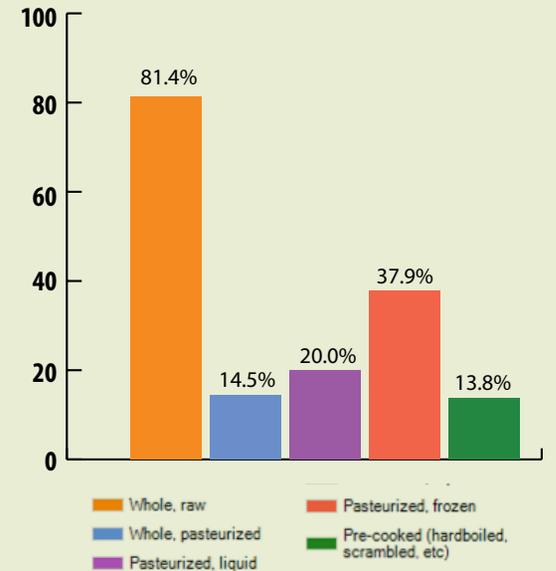
As an institution type, schools purchase less eggs than the other types as indicated in Map 11.

MAP 11 ANNUAL EGG DEMAND IN DOZENS



The majority of institutions use whole, raw eggs, demonstrating that there is demand for whole eggs. Figure 3 shows the percentage of institutions interested in each egg format.

FIGURE 3 PERCENT OF PREFERRED EGG FORMATS BY INSTITUTIONS



With regards to market stability, similar to fruit and vegetables, 93% felt their egg demand would remain stable or increase slightly over the next three years. The 7% who believe they may experience a drop account for \$3,250 of the total egg purchasing volume, or 1%. Therefore even if these institutions stopped buying eggs altogether, their impact on the market as a whole would be minimal. Reasons cited for the decrease included decreasing enrollment, lack of funds, and in one case, a school program will be producing eggs as part of an educational unit. In this case, the food service budget has been approved to pay for the feed in exchange for purchasing eggs.

Further analysis of responses by sector is provided in Appendix A.

81% OF INSTITUTIONS USE FRESH, WHOLE,
UNPASTEURIZED EGGS,
AND 62% OF RESPONDENTS WOULD LIKE
TO SOURCE EGGS LOCALLY.

RESULTS: INFRASTRUCTURE

GENERAL INFORMATION

For the infrastructure survey, there were 67 respondents. Some respondents noted they provide multiple services (see Table 3.1) The survey was disseminated with help from statewide partners. Washington, Chittenden and Rutland counties submitted the most responses with 43% of total respondents (see Table 3.2). The majority of individuals filling out the surveys were owners (73%), followed by Directors, Operations Managers, Coordinators, and Food Purchasing Agents. For-profits represented 84% of respondents.

TABLE 3.1: INFRASTRUCTURE SITES WHO PERFORM THE FOLLOWING ACTIVITIES

Sector for Infrastructure	Respondents
Aggregation	17
Storage	38
Processors	18
Distributors	26

LICENSE & PERMITTING

Several respondents noted they are certified by one or more organization:

- 21% certified by USDA
- 26% by Vermont Agency of Agriculture, Food, and Markets
- 41% by Vermont Department of Health
- 19% by a USDA accredited organic certifying agency
- 12% by another regulatory body

RISK MANAGEMENT

- 75% of respondents do not have an approved written Hazard Area Critical Control Point (HACCP) plan
- 64% do not require their fruit, vegetable, or egg suppliers/producers to be GAP certified or have an on-farm food safety plan
- 78% carry product liability insurance, with almost half of them holding a \$1,000,000 liability policy
- 86% do not require their suppliers to carry product liability insurance

TABLE 3.2 LOCATION OF INFRASTRUCTURE RESPONDENTS BY COUNTY

County	Percentage
Addison	7.5%
Bennington	1.5%
Caledonia	1.5%
Chittenden	13.4%
Essex	--
Franklin	9.0%
Grand Isle	3.0%
Lamoille	7.5%
Orange	10.4%
Orleans	4.5%
Rutland	13.4%
Washington	16.4%
Windham	7.5%
Windsor	4.5%

Note: Some of these respondents also serve more than one country or outside of Vermont.

AGGREGATION

Aggregation of products tends to indicate a larger operation that would have the infrastructure to handle an increase in demand. The following data reveals the characteristics of each site and what their limitations and desires for expansion are.

22% of respondents provide aggregation services. Of those:

- 54% operate a single site
- 23% operate two sites
- 8% operate three sites
- 15% operate four or more sites

Infrastructure in place to handle product efficiently:

- 75% of the primary sites are equipped with standard loading docks and pallet jacks
- 67% of the loading docks are covered
- 50% have a forklift
- 83% are equipped with hand dollies

In terms of products aggregated:

- 67% aggregate refrigerated products
- 47% aggregate fresh, shelf stable products
- 36% aggregate refrigerated, processed products
- 36% aggregate frozen products
- 14% aggregate canned/processed products
- 14% aggregate pasteurized products

Fees for aggregation services are varied:

- 46% charge a mark-up/margin
- 38% charge by the pallet
- 31% charge by the case/piece
- 23% charge by custom quote
- 15% charge by type of service rendered and membership dues
- 8% charge by monthly fees and percent sales commission
- 15% charge no fees for their services

20% OF AGGREGATION RESPONDENTS SAY THEY CAN ACCOMMODATE 200% GROWTH.

Geographic scope indicated how far away aggregated product comes from:

- 64% indicated they had no geographic preference or limitations to their services
- 27% limit their services to within 20 miles
- 9% work within a 50 mile radius

Capacity to handle additional products:

- 7% are at full capacity
- 5% can accommodate 10% growth
- 17% can accommodate 20% growth
- 7% can accommodate 50% growth
- 8% can accommodate 75% growth
- 12% can accommodate 100% growth
- 20% can accommodate 200% growth

Despite capacity limitations, 89% of respondents indicated an interest in servicing more demand.

Sites that can handle additional demand:

- 58% cited year round availability
- 33% cited winter only
- 25% cited spring only
- 17% cited fall only

STORAGE

The ability to handle local products is also affected by storage facilities. Respondents replied to how many facilities they had, where there were, the characteristics of the facilities and ability to increase capacity if demand increased.

72% of respondents provide storage of local produce or eggs. Of those:

- 82% operate a single site
- 11% have two sites
- 7% have three or more sites

Products most universally stored:

- 59% store fresh, refrigerated products
- 41% store fresh, shelf-stable products
- 29% store processed, refrigerated products
- 29% store frozen products
- 24% store processed/canned products
- 13% store pasteurized products

Types of storage:

- 56% have a produce dry room
- 68% have a produce cooler
- 72% have dry refrigeration space
- 48% have dry goods storage
- 76% have freezer space
- 4% have controlled atmosphere storage

Fees for storage services varied:

- 47% do not charge for storage services
- 42% charge by the pallet
- 16% charge by the case/piece
- The remainder charge by custom quote, monthly fees, flat fee, square foot, margin, or membership dues

Geographic limit for storing products:

- 84% of storage providers have no limitations on geographic range of sourced product
- 5% each have a 20, 50, and 250 mile limit

Capacity to store additional products:

- 27% indicated they are at maximum capacity
- 6% have capacity for 10% growth
- 6% have capacity for 20% growth
- 5% have capacity for 50% growth
- 3% have capacity for 75% growth
- 9% have capacity for 100% growth
- 7% have capacity for 200% growth

In terms of when they could handle additional demand:

- 42% cited year round availability
- 25% cited winter only
- 8% cited spring only
- 8% cited fall only
- 58% of respondents indicated an interest in servicing more demand

PROCESSING

We did not receive a large number of responses for processing sites. One reason may be that this is a relatively new activity in Vermont with few facilities. Thirty-eight percent of respondents conduct light and/or value added processing. In addition, the data shows that the majority of respondents (67%) state that their facility is for private use. Also, 25% of the processing respondents service growers, entrepreneurs, nonprofits, community organizations, and workforce development.

Map 12 shows the locations of respondent processing facilities. The buffer zones indicate that the distance to publicly accessible facilities may be a limiting factor for producers in need of processing. More research should be done to determine if this is indeed an issue.

PROCESSING SERVICES

- 7% offer private labeling services (processing services under contract)
- 28% offer shared use/rental of space and equipment
- 21% offer incubator space
- 14% offer community kitchen and work force development
- 7% offer bulk ordering for volume price breaks.

Fees for processing facility use:

- 67% charge by the hour
- 50% do not charge for services
- 33% charge by the type of services rendered
- 17% each charge by the case/piece or by membership dues

Geographic scope:

- 28% note that most of the individuals using their services come from within 20 miles
- 29% also indicate their clientele come from 50 miles or less
- 43% indicate their services are used by individuals within 100 miles of their facilities

Equipment:

- 94% have cleaning and cooking equipment
- 69% have baking equipment
- 44% have steaming equipment
- 56% have canning equipment
- 50% have cryovac/vacuum sealing equipment
- 31% have flash freezing equipment
- 12% have dehydration equipment

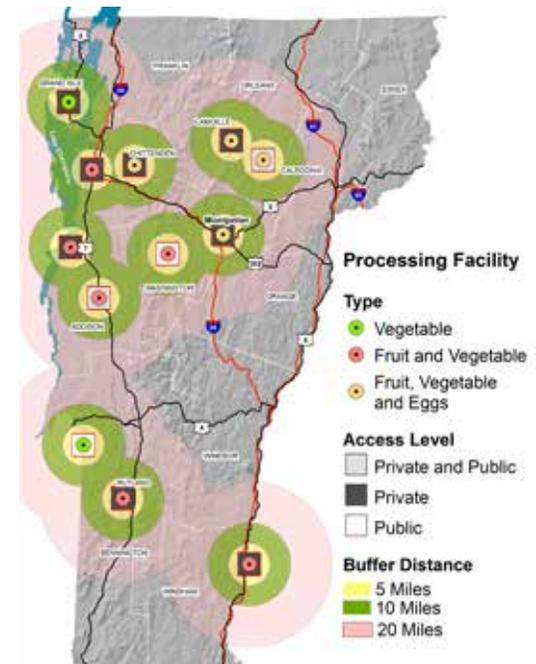
Capacity for Growth:

- 18% are at maximum capacity
- 2% have capacity for 10% growth
- 9% have capacity for 20% growth
- 6% have capacity for 75% growth
- 17% have capacity for 100% growth
- 4% have capacity for 200% growth

In terms of when they could handle additional demand:

- 43% cited year round availability
- 14% cited winter only
- 7% cited spring-only
- 7% cited fall-only

Ninety percent of respondents indicated an interest in servicing more demand for fruit and vegetable processing and 40% were interested in servicing additional egg processing demand.

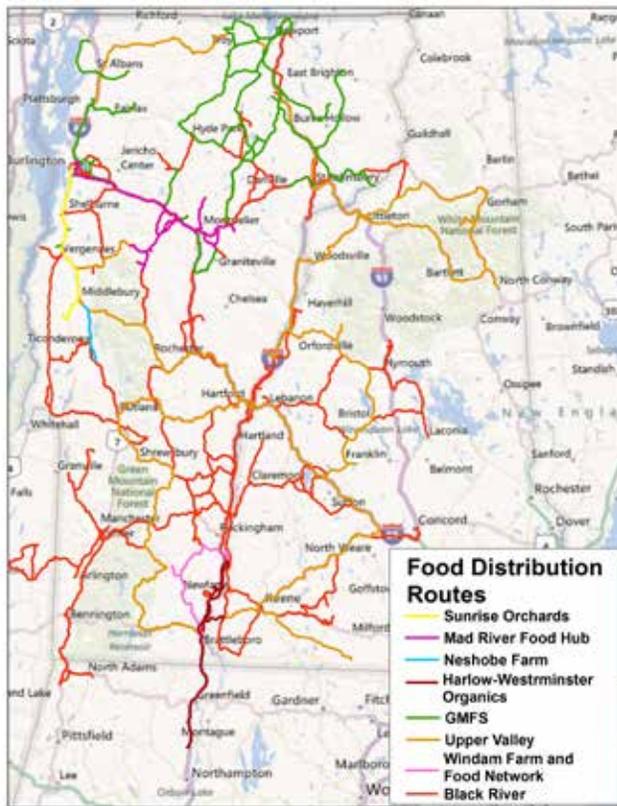
MAP 12: PROCESSING FACILITY TYPE AND LOCATIONS

DISTRIBUTION

This section captures the movement of local produce and eggs around Vermont and characteristics of delivery vehicles, routes and services.

With respect to routes, 84% of distributors have flexibility in their delivery routes. Map 13 reveals the routes for the distributors and producers who were willing and able to share their routes. One of the limiting factors for sharing was that most (84%) are not using computerized mapping or logistics management software that could easily be transferred to mapping software.

MAP 13: FOOD DISTRIBUTION ROUTES



Distribution Services:

58% of respondents provide distribution services. Of these:

- 52% distribute dry/shelf-stable goods
- 67% distribute fresh, refrigerated goods
- 23% distribute processed, refrigerated products
- 21% distribute processed and canned goods
- 33% distribute frozen goods
- 8% distribute pasteurized products

Fees for distribution:

- 38% do not charge for their services
- 24% charge by the case/piece
- 24% use a mark-up or margin
- 14% charge by the pallet
- 10% charge a flat fee
- 5% each charge by the type of services, custom quote, or a percent commission

Geographic scope:

- 25% have no geographic limitations
- 29% work with suppliers within a 20 mile radius
- 21% with suppliers from a 50 mile radius
- 4% with suppliers from a 100 mile radius
- 21% with suppliers from a 250 mile radius

Vehicle types:

- 50% use un-insulated cars and pick-up trucks
- 4% have insulated cars/pick-up trucks
- 36% have un-insulated cargo vans
- 8% have un-insulated box trucks
- 36% have insulated box trucks
- 16% have freezer equipped box trucks
- 8% have un-insulated 18-wheelers
- 16% have refrigerated 18-wheelers
- 8% have freezer equipped 18-wheelers

Capacity for growth:

- 24% are at maximum capacity
- 8% have capacity for 10% growth
- 9% have capacity for 20% growth
- 14% have capacity for 50% growth
- 3% have capacity for 75% growth
- 15% have capacity for 100% growth
- 14% have capacity for 200% growth

Sixty percent of respondents indicated an interest in servicing more demand.

Sites that can handle additional demand:

- 61% cited year round availability
- 17% cited fall or winter-only
- 13% cited spring-only
- 4% cited summer-only.

INSIGHTS AND CHALLENGES IN BUYING LOCAL

Only 13% of infrastructure respondents had a definition of local that matched the definition used in the *Farm to Plate Strategic Plan*: products that originated from Vermont or within a 30-mile radius of Vermont. However, 53% of respondents do currently source local products from Vermont plus 30 miles (as defined by *Farm to Plate*). Fifty-five percent of infrastructure sites are interested in sourcing or sourcing more local products.

Sixty-four percent of respondents say they are getting more requests for local products. Demand is coming primarily from K-12 schools (51%), colleges & universities (46%), and hospitals (36%). Fifty-nine percent have been growing to meet this demand.

Motivations for buying local:

- 71% are motivated to buy local to support local farmers
- 68% to support the local economy
- 48% because they want to know the farmer (where the food comes from)
- 47% because of quality

Top factors preventing the sourcing of local foods are:

- Availability (61%)
- Price (48%)
- Shipping and handling constraints (30%)
- Margins (26%)

Tactics most helpful in sourcing more local foods are:

- Aggregation sites to facilitate pick up (59%)
- Access to storage (38%)
- Identification of producers along supply routes (38%)
- Assistance with marketing (34%)

Key feature-benefits suppliers think buyers are looking for when sourcing local are:

- Competitive pricing (80%)
- Quality (73%)
- Availability (70%)
- Product format that meets buyer needs (33%)

Most used promotion strategies for selling local product are:

- 66% use web-based marketing
- 63% use e-mail updates
- 53% use hard copy flyers
- 50% use in-person sales calls

With respect to facilitating Vermont's efforts to increase distribution of local foods to institutional buyers:

- 31% of respondents are already picking up food from producers and aggregators en-route
- 25% are picking up food from food shelves
- 12% each are picking up fee based drop shipments en-route, back hauling for other distributors/aggregators, and/or picking up/dropping off at community kitchens/shared use facilities.
- Another 28% would consider doing these things.

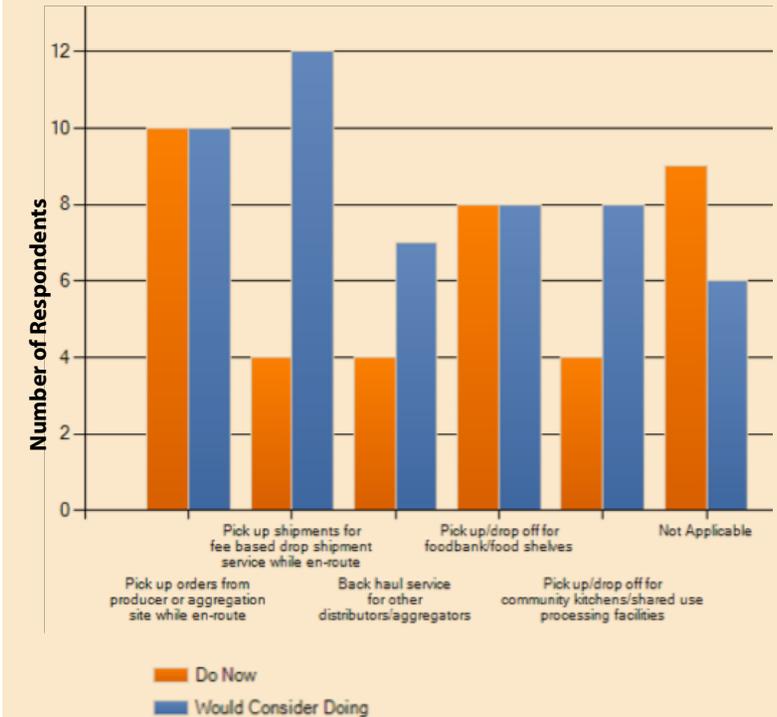
FIGURE 4 MEASURING INFRASTRUCTURE SUPPORT FOR FACILITATING THE PICK-UP AND DISTRIBUTION OF LOCAL FOODS

Figure 4 provides a comparison of how many respondents are providing services now and how many would be willing to consider additional services in the future.

In terms of identifying local produce for their buyers:

- 64% provide the supplier name and/or state of origin in the sales line item description
- 45% have added a "local" column to the sales line item description
- 9% have either created a separate order form for local products, differentiated local offerings by color, or listed them using a bold font.

For more details about the infrastructure services, see Appendix D.

SUMMARY

Across our nation and particularly in Vermont, public schools, colleges and universities, and hospitals are routinely being asked to purchase local foods. The demand for local food and barriers to procurement have previously been identified in a limited way, but this research represents the beginning of diving deeper to determine what the actual institutional demand for local foods is, specifically for produce and eggs. In addition, the Farm to Plate Strategic Plan outlines increased consumption of locally produced foods at institutions as a key goal; therefore, this research included other institution types (ie. food shelves, state cafeterias, prisons, nursing homes and senior meal sites) to understand what opportunities and barriers there are to increasing local food procurement for all Vermont's institutions. Understanding where in the state this demand is located and clustered, if there are similarities in what institutions want (ie. form), and what the opportunities and challenges to serving institutions through the current local food supply chains, provides an important building block towards increasing institutional local food purchasing.

In addition, we attempted to identify who was providing services along the supply chain (aggregation, storage, distribution, and processing) to these institutions, and opportunities and challenges to supplying local food. We realize that as a state, in our enthusiasm to bring more local food to institutions we cannot simply create more or more complicated supply chains. Central to this research and NOFA VT and VT FEED's continued farm to institution work is to improve systems and to develop creative partnerships that address the gaps in the current supply chain and help farmers build viable institutional markets.

We acknowledge that there are many more questions related to the state of farm to institution in Vermont, but believe this report provides a good starting point. We hope that the results and maps that were created can be used by farmers, institutional food service, state agencies, and others to continue to work on how to scale up and out to serve more local food to more people more easily.



**MORE LOCAL FOOD
TO MORE PEOPLE MORE EASILY.**

Courtesy of A. Maggiani



Farm to School Food Education Every Day!



Vermont FEED

A Partnership of: Food Works at Two Rivers Center,
NOFA-VT and Shelburne Farms

